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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/975,910 | 10/12/2001 | Jyh-Cheng Chen | APP 1374-US | 9244 |
| 9941 | 7590 | 06/24/2005 | | EXAMINER |
| TELCORDIA TECHNOLOGIES, INC. ONE TELCORDIA DRIVE 5G116 PISCATAWAY, NJ 08854-4157 | | | LE, VIET Q | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2667 | |

DATE MAILED: 06/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------------|-------------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/975,910 | CHEN ET AL. | |
| | Examiner Viet Q. Le | Art Unit 2667 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 12 October 2001.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-15 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-15 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>10/12/2001</u> | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Maclean (U.S. 2002/0101859 A1), hereinafter referred to as Maclean.

Regarding claim 1, Maclean disclosed a method for carrying out smooth handoff as a mobile station roams from a first base station (Figure 1, RAN 20) to a second base station (Figure 1, RAN 45) both served by a wire line subnet (Figure 1, Networks 34 & 56; paragraph 24) having a link layer different than the link layer of the wireless network serving the mobile station, the method comprising:

Storing a shadow address in the first base station and the second base station, the shadow address corresponding to the mobile station and having a format compatible with the link layer of the wire line subnet (Figure 1, NAT 32 & 38; Paragraphs 27 & 40.) address translation between networks 52 and 34 and between networks 54 & 34 are conducted by the NAT. NAT functions can be a stand-alone

function or it can be combined with the base stations. NAT keep the storage of these translated addresses between the 2 networks. After address translation, the translated addresses must conform to the format requirements of the data network 34),

Transmitting a frame containing the packet from the sending device (Figure 1, RAN 20) over the wire line (Figure 1, networks 34) subnet using the shadow address as the link layer destination address of the packet (Figure 1, NAT 32 & 38; Paragraphs 27 & 40. Address translation between networks 52 and 34 and between networks 54 & 34 are conducted by the NAT. NAT functions can be a stand-alone function or it can be combined with the base stations), and

Processing the frame received from either the first base station (Figure 1, RAN 20) or the second base station (Figure 1, RAN 45) in the mobile station (Mobile station 16).

Regarding claim 2, Maclean disclosed the method as recited in claim 1 wherein the storing includes assigning the shadow address by the first base station (Figure 1, NAT 32 & 38; Paragraphs 27 & 40. Address translation between networks 52 and 34 and between networks 54 & 34 are conducted by the NAT. NAT functions can be a stand-alone function or it can be combined with the base stations. NAT keep the storage of these translated addresses between the 2 networks).

Regarding claim 3, Maclean disclosed the method as recited in claim 2 wherein the transmitting includes communicating the shadow address from at least one of the base stations to the sending device in response to an address resolution request by the sending device (Figure 1, NAT 32 & 38; Paragraphs 27 & 40. Address translation

between networks 52 and 34 and between networks 54 & 34 are conducted by the NAT. NAT functions can be a stand-alone function or it can be combined with the base stations. NAT keep the storage of these translated addresses between the 2 networks. After address translation, the translated addresses must conform to the format requirements of the data network 34. Resolution is conducted between SGSN 22 and GGSN 54 of figure 1).

Regarding claims 4 & 12, Maclean disclosed the method as recited in claim 1 wherein the mobile station (Figure 1, mobile station 16) has an IP layer address (Figure 1, wireless network 52. Paragraph 21. All network elements in wireless network 52 communicated with each others over IP layer) and the storing includes storing the IP layer address, the shadow address, and the wireless link layer address as entries in a watch list for the mobile station (Figure 1, NAT 32 & 38; Paragraphs 27 & 40. Address translation between networks 52 and 34 and between networks 54 & 34 are conducted by the NAT. NAT functions can be a stand-alone function or it can be combined with the base stations. NAT keep the storage of these translated addresses between the 2 networks).

Regarding claims 5 & 9, Maclean disclosed the method as recited in claim 1 further comprising, prior to the storing, sending the shadow address from the first base station to the mobile station and storing the shadow address in the mobile station (Figure 1, NAT 32 & 38; Paragraphs 27 & 40. Address translation between networks 52 and 34 and between networks 54 & 34 are conducted by the NAT. NAT functions can be a stand-alone function or it can be combined with the base stations. NAT keep the

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storage of these translated addresses between the 2 networks. Mobile station knows its corresponding shadow address from NAT).

Regarding claims 6 & 10, Maclean disclosed the method as recited in claim 5 further comprising, after the sending, transmitting the shadow address to the second base station from the mobile station (Figure 1, NAT 32 & 38; Paragraphs 27 & 40. Address translation between networks 52 and 34 and between networks 54 & 34 are conducted by the NAT. NAT functions can be a stand-alone function or it can be combined with any of the base stations RAN 20 or RAN 45. NAT keep the storage of these translated addresses between the 2 networks. Mobile station 16 send address to NAT and NAT will do address translation to an appropriate address at the other side of network 34 and eventually to network 54).

Regarding claims 7 & 11, Maclean disclosed the method as recited in claim 5 further comprising, after the sending, transmitting the shadow address to the second base station from the mobile station as part of a standard message to register the mobile station with the second base station during roaming (Figure 1, NAT 32 & 38; Paragraphs 27 & 40. Address translation between networks 52 and 34 and between networks 54 & 34 are conducted by the NAT. NAT functions can be a stand-alone function or it can be combined with any of the base stations RAN 20 or RAN 45. NAT keep the storage of these translated addresses between the 2 networks. Mobile station 16 send address to NAT and NAT will do address translation to an appropriate address at the other side of network 34 and eventually to network 54).

Regarding claim 8, Maclean disclosed a method for carrying out smooth handoff of a mobile station (Figure 1, mobile station 16) from a first base station (Figure 1, RAN 20) to a second base station (Figure 1, RAN 45) both served by a wire line subnet (Figure 1, networks 34 & 56) having a link layer different than the link layer of the wireless network serving the mobile station, the method comprising

Assigning a shadow address to the mobile station, the shadow address corresponding to the mobile station and having a format compatible with the link layer of the wire line subnet, storing the shadow address in both the first base station and the second base station (Figure 1, NAT 32 & 38; Paragraphs 27 & 40. Address translation between networks 52 and 34 and between networks 54 & 34 are conducted by the NAT. NAT functions can be a stand-alone function or it can be combined with the base stations. NAT keep the storage of these translated addresses between the 2 networks. After address translation, the translated addresses must conform to the format requirements of the data network 34), communicating the shadow address from at least one of the stations to the sending device in response to an address resolution request by the sending device,

Transmitting a frame containing the packet from the sending device (Figure 1, RAN 20) over the wire line (Figure 1, networks 34) subnet using the shadow address as the link layer destination address of the packet (Figure 1, NAT 32 & 38; Paragraphs 27 & 40. Address translation between networks 52 and 34 and between networks 54 & 34 are conducted by the NAT. NAT functions can be a stand-alone function or it can be combined with the base stations), and

Processing the frame received from either the first base station (Figure 1, RAN 20) or the second base station (Figure 1, RAN 45) in the mobile station (Mobile station 16).

Regarding claim 13, Maclean disclosed the method as recited in claim 12 wherein the address resolution request includes the IP layer address of the mobile station (Figure 1, address resolution occurs between the SGSN 22 and GGSN 54 over IP network), and wherein the method further comprises, after the storing, looking up the shadow address in the watch list with reference to the IP layer address contained in the address resolution request (Figure 1, NAT 32 & 38; Paragraphs 27 & 40. Address translation between networks 52 and 34 and between networks 54 & 34 are conducted by the NAT. NAT functions can be a stand-alone function or it can be combined with the base stations. NAT keep the storage of these translated addresses between the 2 networks),

Regarding claim 14, Maclean disclosed the method as recited in claim 8 wherein the address resolution request includes the IP layer address of the mobile station (Figure 1, address resolution occurs in network 54 which is a IP network) and the communicating includes looking up the shadow address in the watch list corresponding to the IP layer address of the mobile station and sending the shadow address in response to the address resolution request (Figure 1, NAT 32 & 38; Paragraphs 27 & 40. Address translation between networks 52 and 34 and between networks 54 & 34 are conducted by the NAT. NAT functions can be a stand-alone function or it can be

combined with the base stations. NAT keep the storage of these translated addresses between the 2 networks).

Regarding claim 15, Maclean disclosed circuitry for carrying out smooth handoff as a mobile station roams from a first base station (Figure 1, RAN 20) to a second base station (Figure 1, RAN 45) both served by a wire line subnet (Figure 1, Networks 34 & 56; paragraph 24) having a link layer different than the link layer of the wireless network serving the mobile station, the circuitry comprising

A storage device for storing a shadow address in the fist base station and the second base station, the shadow address corresponding to the mobile station and having a format compatible with the link layer of the wire line subnet (Figure 1, NAT 32 & 38; Paragraphs 27 & 40. Address translation between networks 52 and 34 and between networks 54 & 34 are conducted by the NAT. NAT functions can be a stand-alone function or it can be combined with the base stations. NAT keep the storage of these translated addresses between the 2 networks. After address translation, the translated addresses must conform to the format requirements of the data network 34),

A receiver for receiving a frame containing the packet transmitted from the sending device (Figure 1, RAN 20) over the wire line subnet (Figure 1, networks 34) using the shadow address as the link layer destination address of the packet (Figure 1, NAT 32 & 38; Paragraphs 27 & 40. Address translation between networks 52 and 34 and between networks 54 & 34 are conducted by the NAT. NAT functions can be a stand-alone function or it can be combined with the base stations), and

A processor for processing the frame received from either the first base station (Figure 1, RAN 20) or the second base station (Figure 1, RAN 45) in the mobile station (Mobile station 16).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Viet Q. Le whose telephone number is 571-272-2246. The examiner can normally be reached on 8 AM -5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VL


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SUPERVISORY PATENT EXAMINER
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